



# Ohio Energy Project

## 2018-2019

Dublin Jerome High School  
Dublin City Schools

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# Ohio Energy Project

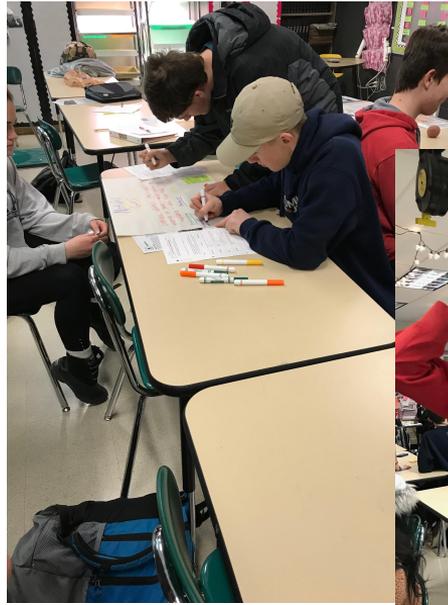
## 2018-2019

### Goals:

- Bring Ohio Energy Project's goal of "school to home" approach to students of Dublin Jerome High School
- Teach energy and energy resources to students in a fun and engaging way using Ohio Energy Project and NEED's resources
- Have students complete the unit a smarter citizen with a better understanding and plan to reduce their energy usage

# What is Energy?

- Potential vs. Kinetic energy
- Energy Transformations with toys
- Nonrenewable vs renewable
  - Source team match-up
- jigsaw expert groups
- Energy carnival review fun and games
- Assessment-online schoology quiz

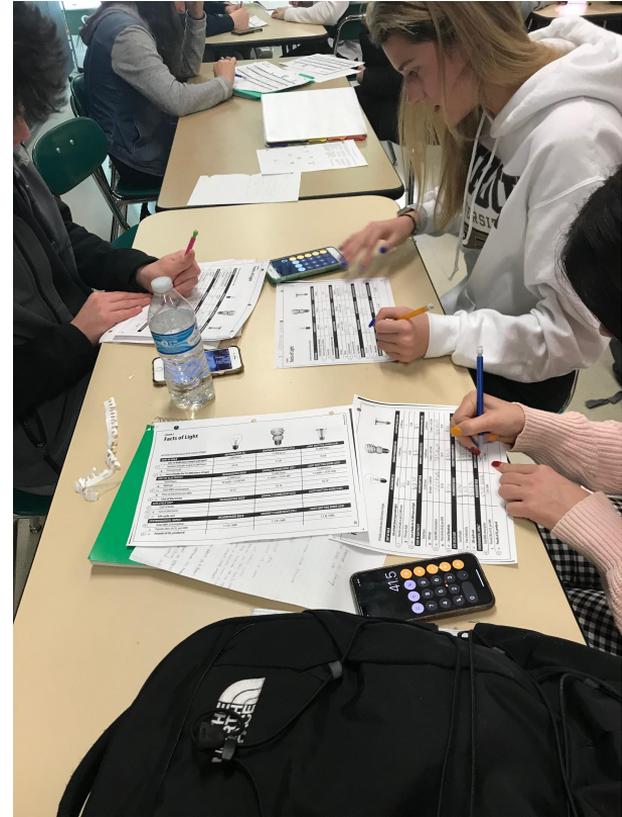


# Lighting

-Students completed the home audit

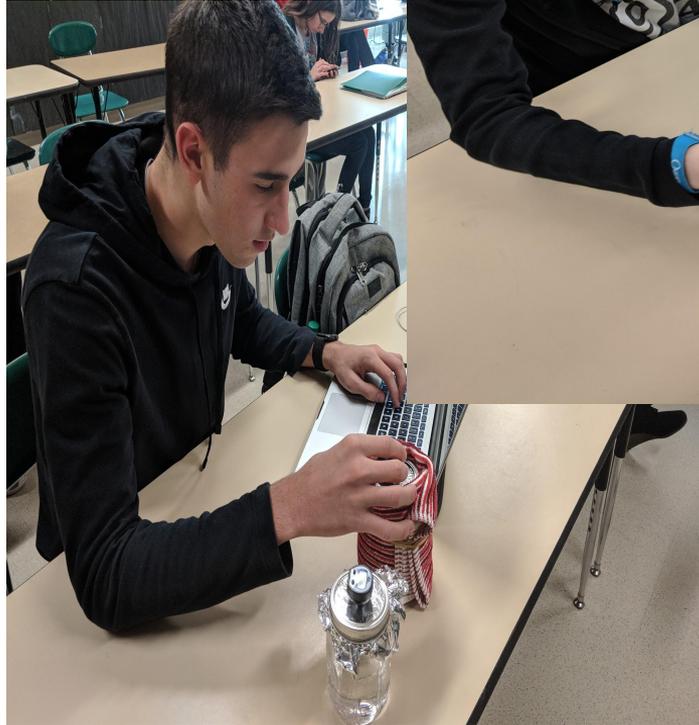
-Lightbulb experiment using google docs and sheets and wrote a formal lab report

-Facts of Light/research/all about the bulb activities



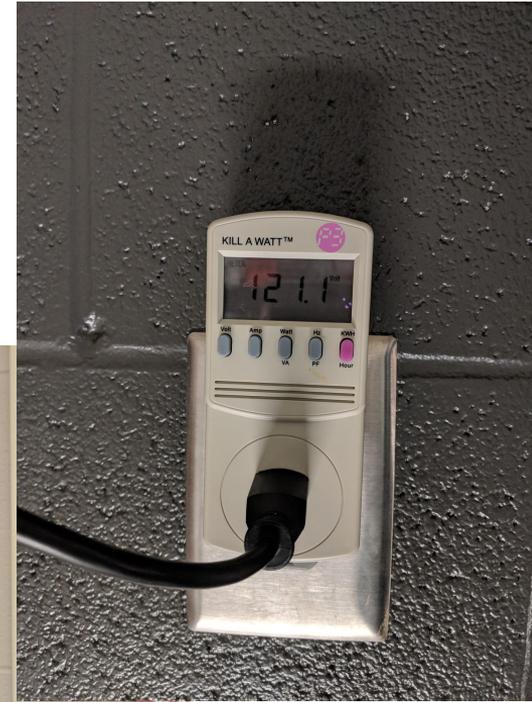
# Heating and Cooling

- Students completed the home audit
- Students designed and performed heating/insulation lab and wrote a formal lab report
- Students investigated temperatures around the school and identified areas where modifications could be made to save the school energy and money



# Appliances and Vampire Energy

- students completed the home audit
- students investigated appliances around the school to determine how much energy and money was used
- groups of students chose a vampire energy appliance, researched and developed a public service announcement urging students and teachers to make changes to reduce the energy usage from these



# Online integration and assessments

## Data:

**Table 2:** Title of the Data Table. Draw AND Insert your own data table here! Be sure to include the time, types of bulbs and the temperature for each minute for a total of 10 minutes.

## Presentation of the Data:

Insert your graph here. Make sure all axes are labeled with title and units. Make sure your graph has a good title. (Lighting lab is not a good title!) Hint-use your IV and DV to help you with your axes and units!

**Conclusion and Evaluation Questions:** Answer the following questions in complete sentences.

1. Do your results support your hypothesis? Explain.
2. What characteristics do the light bulbs have in common?
3. How do the light bulbs differ?
4. Which light bulb is coolest in temperature when in use?
5. Which bulb is truly a "heat bulb" not a "light bulb"? Explain.
6. Which light bulb do you think would be best in your home to help with energy efficiency?

Students were placed in lab groups for each investigation and wrote formal lab reports following the science department designed lab report format which includes experiment design, appropriate tables and graphs and conclusion/analysis questions.

Students were given small quizzes after each unit online that contained matching/multiple choice/short answer questions

## Question 1 (10 points)

Choose 2 (1 renewable and 1 nonrenewable) energy source and explain at least 2 advantages and 2 disadvantages of each.

- a. list the type of energy source AND label it as renewable or nonrenewable (1 point)
- b. Give at least 2 correct advantages (2 points)
- c. Give at least 2 correct disadvantages (2 points)

\*\*\*Do this for both of the sources you chose\*\*\*

## Question 2 (5 points)

Using the pictures below, identify if the energy source is renewable or nonrenewable.

Column A

1.



2.



Column B

- a. nonrenewable
- b. renewable



After investigating appliances around the school, students chose an appliance that uses energy when not in use (vampire energy). They researched the appliance and determined how much energy and money was being used by these appliances when in use and not. They presented their information in the form of a public service announcement video.